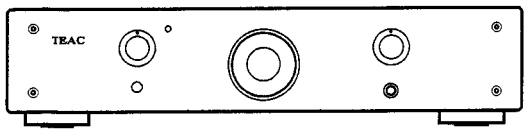
TEAC



SERVICE MANUAL

A-BX7R

Integrated Stereo Amplifier

For Europe, U.K. Model

NOTES

- PC boards shown are viewed from parts side.
- The parts with no reference number or no parts number in the exploded views are not supplied.
- As regards the resistors and capacitors, refer to the circuit diagrams contained in this manual.
- ⚠ Parts marked with this sign are safety critical components. They must be replaced with identical components - refer to the appropriate parts list and ensure exact replacement.
- Parts of [ ] mark can be used only with the version designated.
  [E]:EUROPE [UK]:U.K.
  A-BX7R(N):Gold Version A-BX7R(B):Black Version

Effective : June 1996

D00234300A

1 SPECIFICATIONS

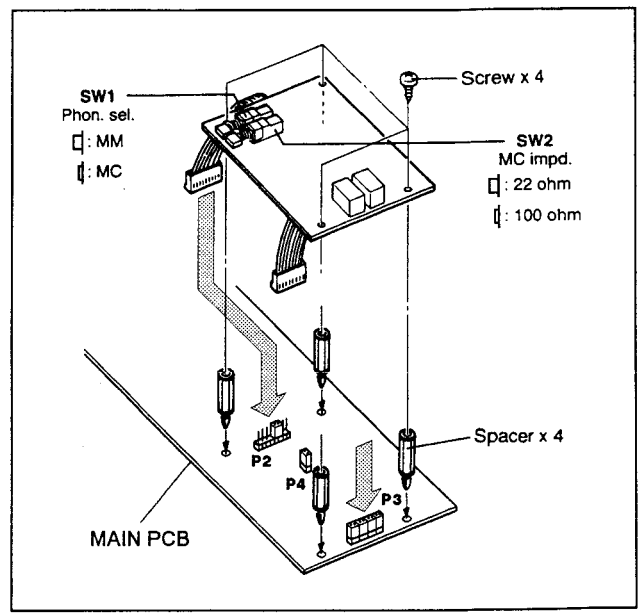
Continuous Power Output (RMS):
50W+50W (20 – 20,000 Hz, 8 ohms)
70W+70W (20 – 20,000 Hz, 4 ohms)
Dynamic Power Output (EIA):
56W (8 ohms)
82W (4 ohms)
Total Harmonic Distortion:
0.015% (8 ohms)
0.03% (4 ohms)
Input Sensitivity/Impedance:
CD, TUNER, AUX, TAPE: 300 mV/20k ohms
BALANCED (XLR): 1 V/20k ohms
Signal-to-Noise Ratio (IHF A):
CD, TUNER, AUX, TAPE: 97 dB
Frequency Response:
CD, TUNER, AUX, TAPE, BALANCED:
20 – 40,000 Hz, – 1 dB
Power Requirements/Power Consumption:
230 V AC, 50 Hz, 300 W
Dimensions (W x H x D):
443 × 103 × 381mm
Weight (net): 9.6 kg
Standard Accessories:
Wireless Remote Control Unit
(RC-591; for Gold-finish version or
RC-593; for Black-finish version) × 1,
AC cord × 1, Owner's Manual × 1

● Improvements may result in specification or feature changes without notice.

2 INSTALLATION OF PA-B10

● Disconnect power line cord.

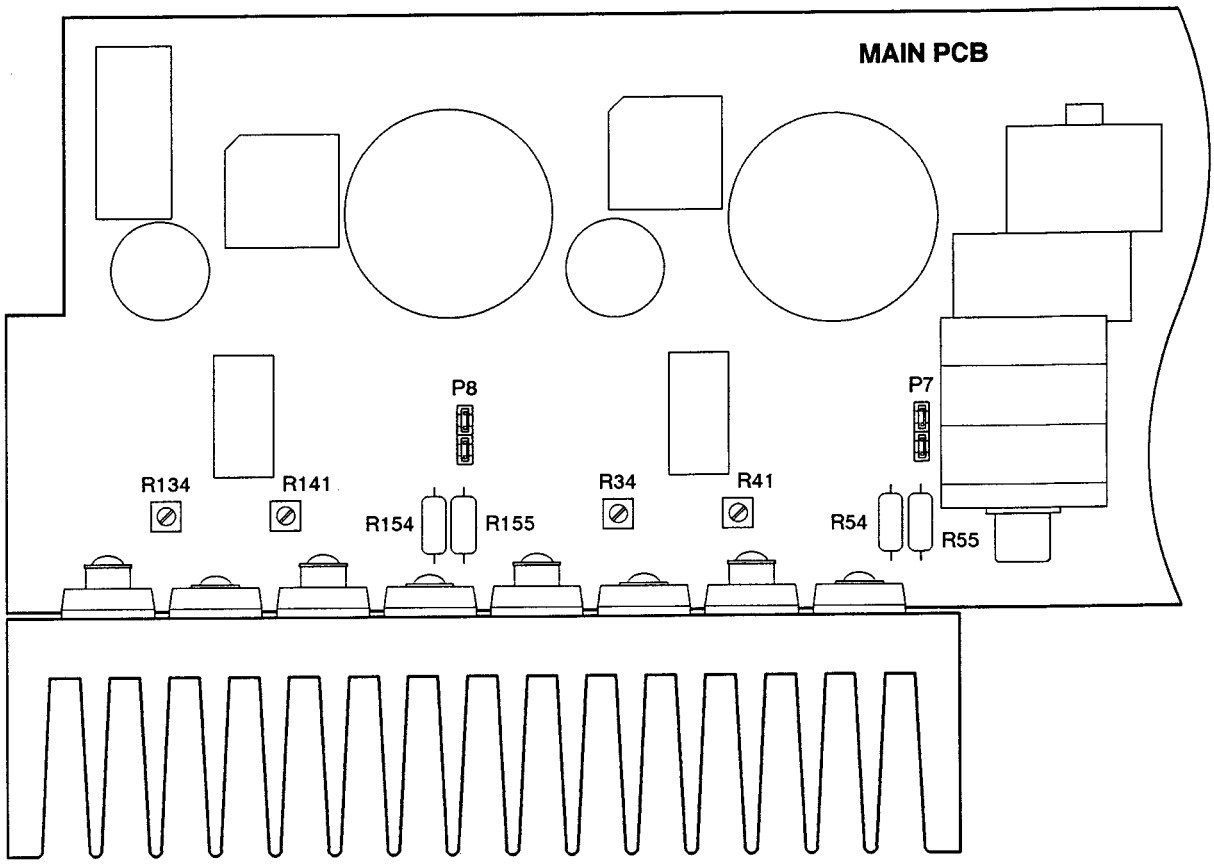
1. Using a hexagon-head tool, remove the top cover of **A-BX7R**. Insert the four spacers into the holes in the main PCB.
2. Remove the four jumpers on **P3**, one jumper **P4** and the one jumper on **P2** (Pins 3 & 4) on the main PCB.
3. Connect the long wires connector of **PA-B10** to **P3**, and the short wires connector to **P2** on the main PCB.
4. Fix the **PA-B10** on the spacers using the four screws provided.
5. Before fixing the top cover again, select the right position of **SW1** (MM or MC) and **SW2** (For MC cartridges, the impedance set to 22 Ω or 100 Ω) on **PA-B10**.
6. Connect the turntable to the AUX terminals and GND terminal of **A-BX7R**.



3 ADJUSTMENT

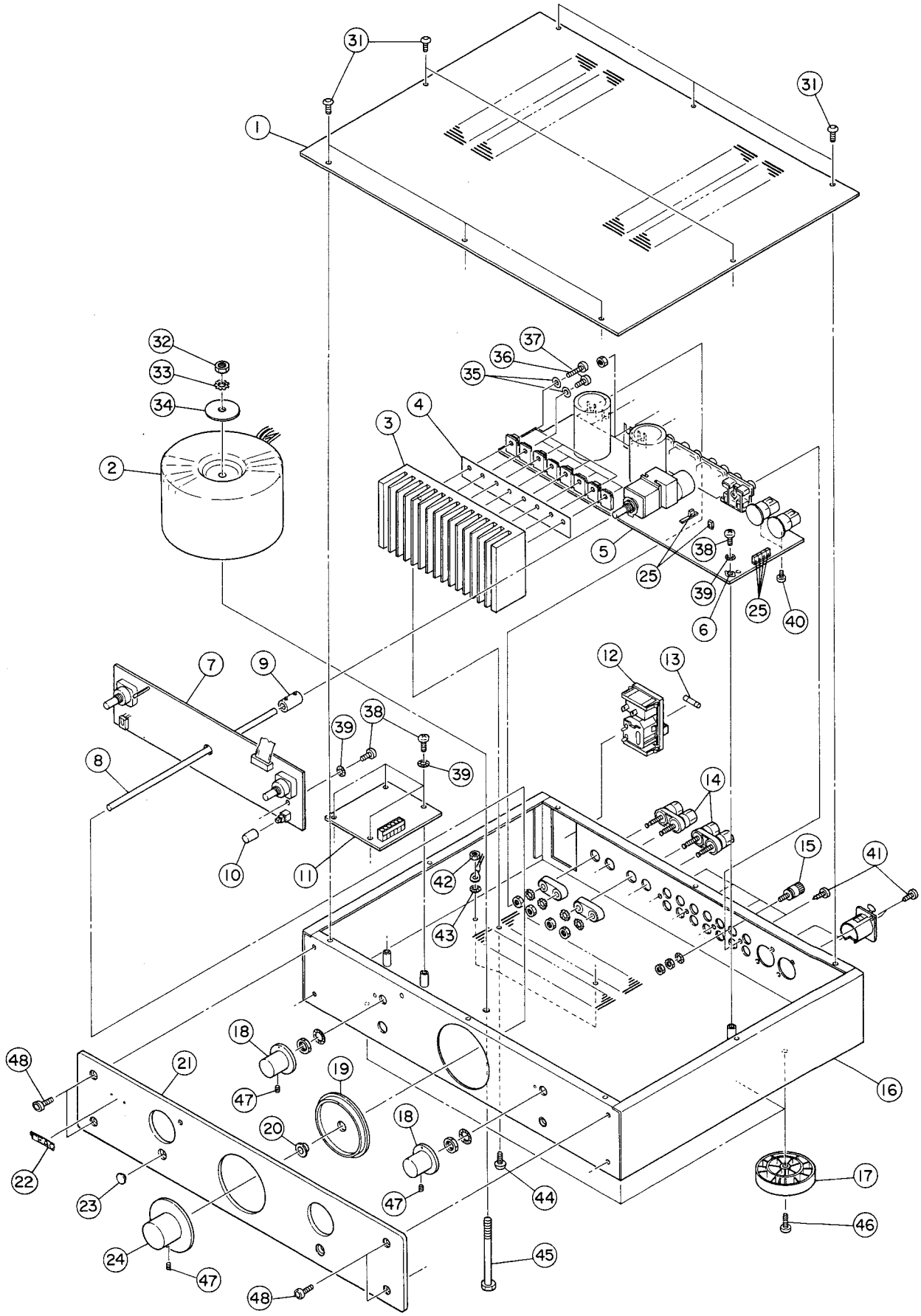
Bias Current Adjustment

1. Remove the four jumpers on **P7** and **P8**.
2. After turn on, then preadjust with the small four potmeters to a bias current of 4 x **15mV** across **R54**, **R55**, **R154** and **R155**.
3. Then put on the lid and wait around 30 minutes.
4. Take off the lid again and readjust the bias current to 4 x **20mV**.
5. Remember to install the four jumpers again on **P7** and **P8**.



Adjustment VR	Measuring Point
R34	R55
R41	R54
R134	R155
R141	R154

4 EXPLODED VIEWS AND PARTS LIST



EXPLODED VIEW

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
1	9A05287400	LID(GLD)	A-BX7R(N)
	9A05912200	LID(BLK)	A-BX7R(B)
2	⚠ 9A05911900	TRANSFORMER, TOROID 300VA	
3	9A05213000	HEATSINK	
4	9A05213100	ISOLATION, SILICONE 146X24	
5	9A05913200	MAIN PCB ASSY	
6	9A05212500	TERMINAL, RING M4	
7	9A05913300	FRONT PANEL PCB ASSY	
8	9A05912500	VOLUME SHAFT, 6X230MM	
9	9A05215900	LINK, 6MM 12X20MM	
10	9A05215100	KNOB, MONITOR(BLK)	A-BX7R(B)
	9A05287900	KNOB, MONITOR(GLD)	A-BX7R(N)
11	9A06076500	M-CONNECTOR PCB ASSY	
12	⚠ 9A05212900	INLET	
13	⚠ 9A05287200	FUSE, F6.3AH/250V	
14	9A05213200	BINDING POST, K207Z(GLD)	
15	9A05213300	BINDING POST, K213(BLK)	
16	9A05912000	CABINET, BASIS(BLK)	A-BX7R(B)
	9A05912100	CABINET, BASIS(GLD)	A-BX7R(N)
17	5801414900	FOOT ASSY	
18	9A05214800	KNOB, SELECTOR(BLK)	A-BX7R(B)
	9A05287700	KNOB, SELECTOR(GLD)	A-BX7R(N)
19	9A05215000	DECORATION RING, G	
20	9A05216200	BEARING, 9X14MM	
21	9A05912300	FRONT PANEL(BLK)	A-BX7R(B)
	9A05912400	FRONT PANEL(GLD)	A-BX7R(N)
22	5801413200	NAME PLATE, TEAC	A-BX7R(B)
	5801533700	NAME PLATE, TEAC (GRY T)	A-BX7R(N)
23	9A06076200	REMOTE WINDOW, 8.8MM	
24	9A05214900	KNOB, VOL(BLK)	A-BX7R(B)
	9A05287800	KNOB, VOL(GLD)	A-BX7R(N)
25	9A05213500	MINI JUMPER, YU2 B	
31	9A05214200	SCREW, ULS M3X6	
32	9A05215400	NUT, M6	
33	9A05215500	WASHER, M6 VIB.PROOF	
34	9A05395800	WASHER, 30X1.6MM	
35	9A05840000	WASHER, M3 ANTIROTATIONAL	
36	9A05211800	SCREW, HEX(BLK) M3X12	
37	9A05211700	SCREW, HEX(BLK) M3X10	
38	9A05211600	SUPADRIV, M3X8	
39	9A05211900	WASHER, M3 INT.SP	
40	9A05215700	SCREW, SELFTAP 2.9X4.5	
41	9A05215800	SCREW, SELFTAP 2.9X8(BLK)	
42	9A05395900	NUT, M4	
43	9A05212100	WASHER, M4 SP	
44	9A05214300	SCREW, ULS M4X8	
45	9A05215300	SCREW, MACHINE M6X75 HFC	
46	9A05912600	SCREW, SELFTAP 3.9X19 HFC	
47	9A05214100	SCREW, MSF FLAT M3X6	
48	9A05396100	SCREW, UNBRAKO M4X10(BLK)	A-BX7R(B)
	9A05396200	SCREW, UNBRAKO M4X10(GLD)	A-BX7R(N)

5 PC BOARDS AND PARTS LIST

MAIN PCB ASSY

REF. NO.		PARTS NO.	DESCRIPTION
		9A05913200	MAIN PCB ASSY
C 14, 114	⚠	9A05916500	C, ELYT 47UF 35V
C200, 201	⚠	9A05611300	C, ELYT 10MF 50V
C202-205	⚠	9A05916600	C, ELYT 100UF 35V
D1-5		9A05917100	DIODE, PMLL4148
D200, 201		9A05917100	DIODE, PMLL4148
D202, 203	⚠	9A05204300	DIODE, PBPC10 10A 100V
D204-206		9A05917100	DIODE, PMLL4148
G1		9A05207700	PCB WASHER, M3.5
J1-6		9A05919900	PHONO PLUG, 4P
J7		9A05920000	JACK, RCA PHONO 2P
J8, 9		9A05208700	XLR FEMALE, NC3FDH-B GOLD
K1-10		9A05208300	RELAY, DPDT 24V M4-24H
K11		9A05208400	RELAY, DPDT 24V/8A
P1		9A05207800	SCREW TERMINAL, 4P
P2, 3		9A05920300	HEADER, 8P
P4		9A05920500	2WAY PIN
P400		9A05920700	HEADER, 14P
P5A, 5B		9A05920600	FORK PCB TERMINAL
P6A, 6B		9A05920600	FORK PCB TERMINAL
P7, 8		9A05920400	4WAY PIN
Q 1, 101		9A05918100	TR, BC850
Q 2, 102		9A05918100	TR, BC850
Q 3, 103		9A05918100	TR, BC850
Q 4, 104		9A05918100	TR, BC850
Q 5, 105		9A05918100	TR, BC850
Q 6, 106		9A05918900	TR, PZT2222
Q 7, 107		9A05918400	TR, BC860
Q 8, 108		9A05919100	TR, PZT2907
Q 9, 109		9A05918400	TR, BC860
Q 10, 110		9A05919100	TR, PZT2907
Q 11, 111		9A05918900	TR, PZT2222
Q 12, 112		9A05918100	TR, BC850
Q 13, 113		9A05918400	TR, BC860
Q 14, 114		9A05918400	TR, BC860
Q 15, 115		9A05918100	TR, BC850
Q 16, 116		9A05207000	TR, 2SC3420BL
Q 17, 117		9A05918100	TR, BC850
Q 18, 118		9A05918400	TR, BC860
Q 19, 119		9A05207000	TR, 2SC3420BL
Q 20, 120		9A05919200	TR, PZT1357
Q 21, 121	⚠	9A05207400	TR, 2SC39070
Q 22, 122	⚠	9A05207300	TR, 2SA15160
Q 23, 123		9A05918400	TR, BC860
Q 24, 124		9A05918400	TR, BC860
Q 25, 125		9A05918100	TR, BC850
Q 26, 126		9A05207000	TR, 2SC3420BL
Q 27, 127		9A05918100	TR, BC850
Q 28, 128		9A05918400	TR, BC860
Q 29, 129		9A05207000	TR, 2SC3420BL
Q 30, 130		9A05919200	TR, PZT1357
Q 31, 131	⚠	9A05207400	TR, 2SC39070
Q 32, 132	⚠	9A05207300	TR, 2SA15160
Q133		9A05918100	TR, BC850
Q200		9A05918400	TR, BC860

MAIN PCB ASSY

REF. NO.		PARTS NO.	DESCRIPTION
Q201		9A05918100	TR, BC850
Q300-304		9A05918100	TR, BC850
Q307, 308		9A05918100	TR, BC850
Q309, 310		9A05918400	TR, BC860
REG1, 2	⚠	9A05207100	IC, LM317T
REG3	⚠	9A05207200	IC, LM337T
R 22, 122	⚠	9A05915200	R, 22RH 5%
R 23, 123	⚠	9A05915200	R, 22RH 5%
R 34, 134		9A05915400	TRIM POTMETER, 100R
R 41, 141		9A05915400	TRIM POTMETER, 100R
R 54, 154	⚠	9A05203500	R, PR02 2W 0R22 J
R 55, 155	⚠	9A05203500	R, PR02 2W 0R22 J
R349	⚠	9A05915300	R, 220R 2W
R500		9A05919800	MOTOR, POTM 2X100K
S1, 2	⚠	9A05920100	FUSE, T5A/250V
S3, 4	⚠	9A05920200	FUSE, RESET 4A
U1-5		9A05919300	IC, OP275GSR
U100, 101		9A05919400	IC, MC1458D
U200		9A05919500	IC, 4093
U201		9A05919600	IC, 4075
Z 1, 101		9A05917500	ZENER DIODE, 5V6
Z 2, 102		9A05917500	ZENER DIODE, 5V6
Z200, 203		9A05917300	ZENER DIODE, 2V7
Z201, 202		9A05917500	ZENER DIODE, 5V6
Z204-207		9A05917900	ZENER DIODE, 12V
Z208		9A05917500	ZENER DIODE, 5V6

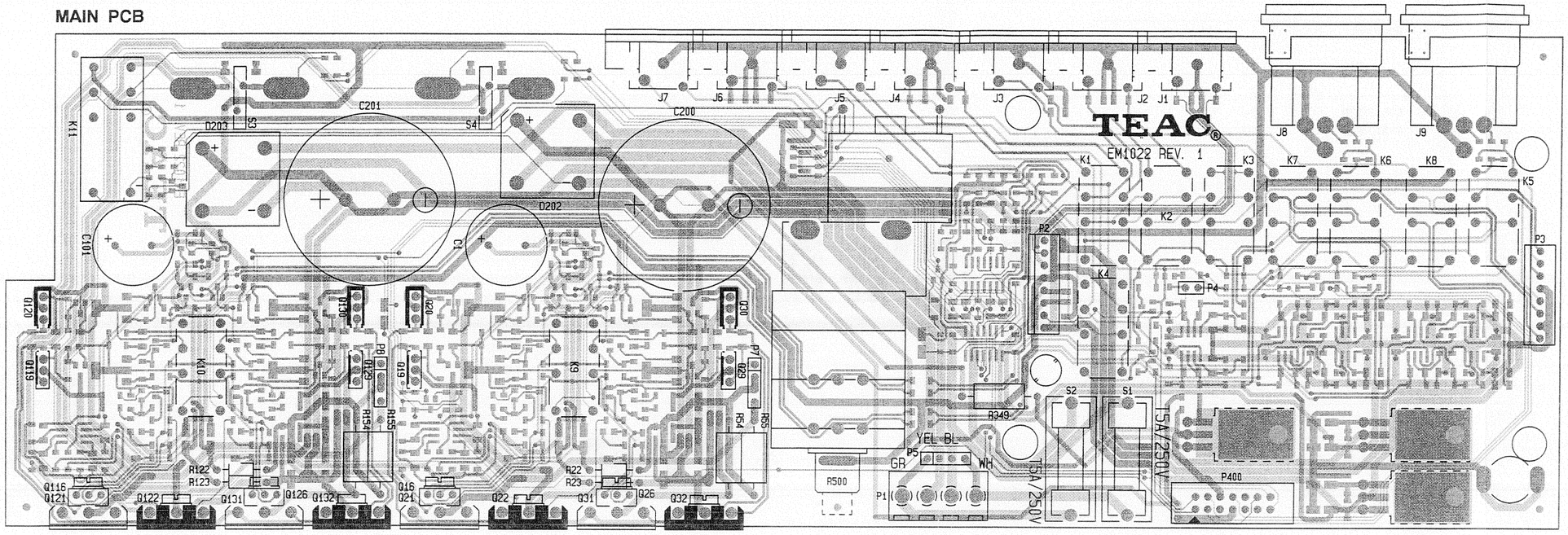
FRONT PANEL PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	9A05913300	FRONT PANEL PCB ASSY
D1	9A05209000	LED, RED/GREEN
IR1	9A05921400	INFRARED SENSOR, TFMS5380
JP1	9A05209100	DIP CONNECTOR, 14P
Q1, 2	9A05918100	TR, BC850
R6	9A05203600	RES-NETWORK, 7X10K 8P SIL
R10	9A06076400	RES-NETWORK, 4X1K SIL
SW1, 2	9A05208900	SW, SELECTOR 1X12
SW3	9A05921600	SW, PUSH DPDT
U1	9A05921500	DIL SOCKET, 40WAY
X1	9A05921300	CER-RESONATOR, 12.0MHZ

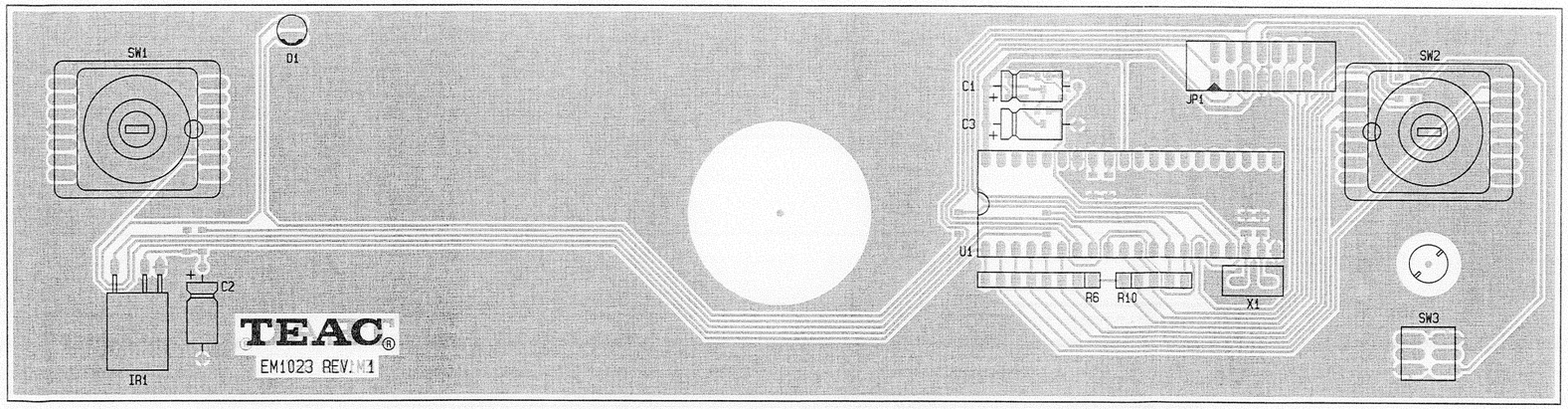
MAIN CONNECTOR PCB ASSY

REF. NO.		PARTS NO.	DESCRIPTION
		9A06076500	M-CONNECTOR PCB ASSY
C1	⚠	9A05920800	CAPACITOR, 100N
C6	⚠	9A05920900	CAPACITOR, 3300UF 6V3
D1, 2	⚠	9A05209600	DIODE, 1N5400
P1		9A05209700	SCREW TERMINAL, 2P
R1	⚠	9A05209500	R, VDR 275VAC
R2	⚠	9A05306700	R, MRS25 0.33W 470K F
R3	⚠	9A06076300	INRUSH LIMITER, 2.2A NTC

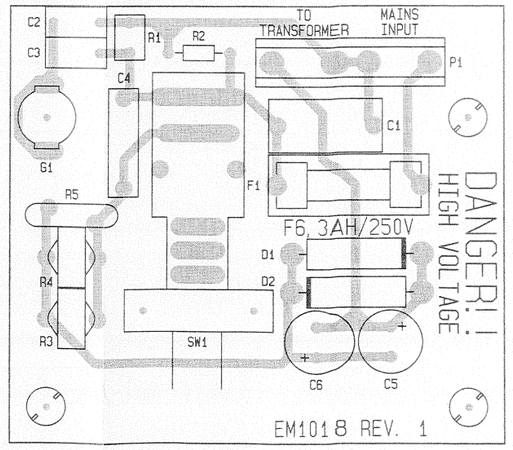
MAIN PCB



FRONT PANEL PCB



MAIN CONNECTOR PCB



6 INCLUDED ACCESSORIES

INCLUDED ACCESSORIES

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
	⚠ 9A05211100	POWER CORD [E]	
	⚠ 9A05211300	POWER CORD [UK]	
	9A05627800	OWNER'S MANUAL, 6-LANG	
	9A05913000	REMOTE CONTROLLER	A-BX7R(N)
	9A05913100	REMOTE CONTROLLER	A-BX7R(B)

A-BX7R

TEAC

TEAC CORPORATION	3-7-3, Nakacho, Musashino-shi, Tokyo 180, Japan	Phone:(0422)52-5081
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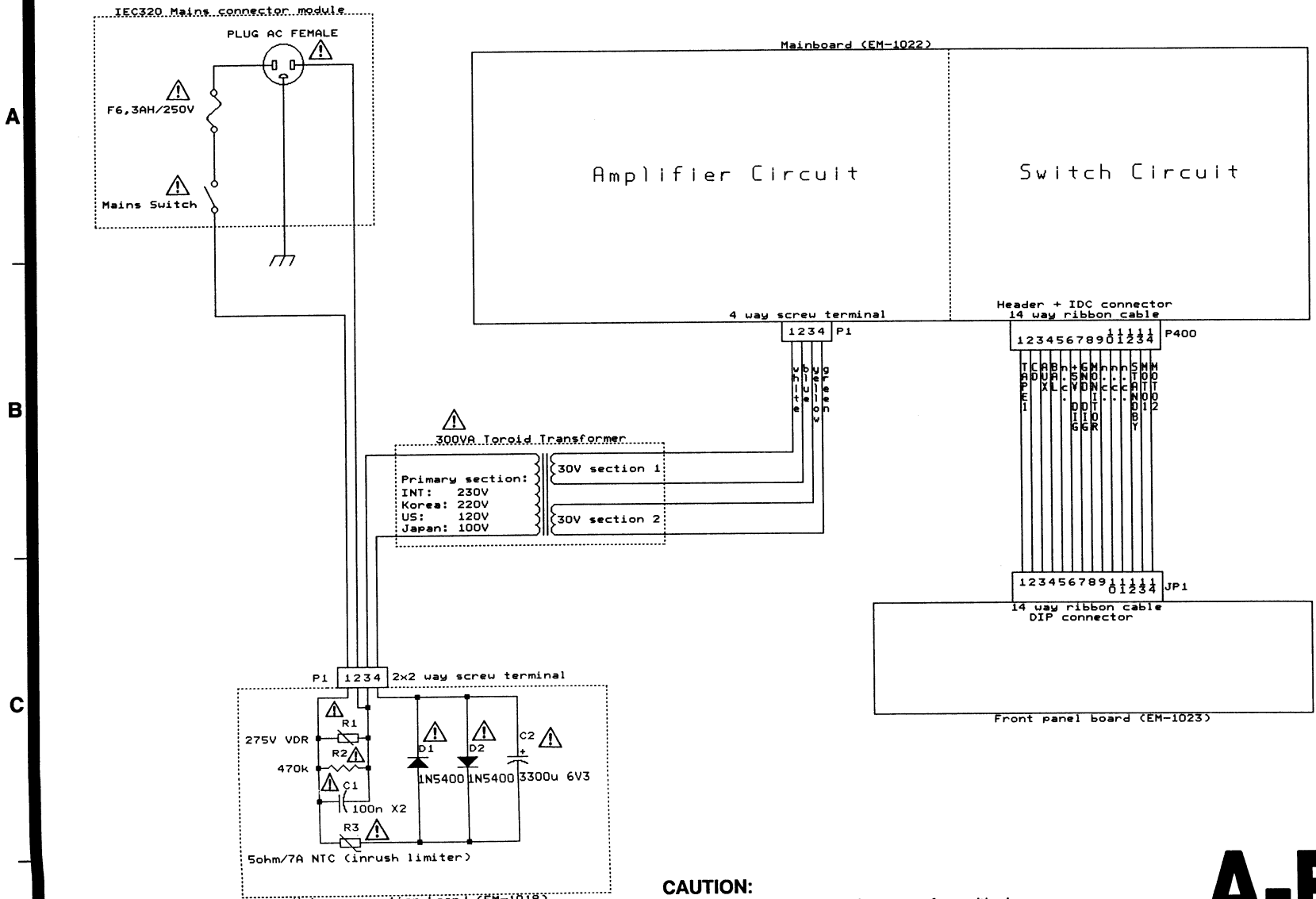
TEAC UK LIMITED	5 Marlin House, Marlins Meadow, The Croxley Centre, Watford, Herts. WD1 8YA, U.K.	Phone:01923-819699
TEAC DEUTSCHLAND GmbH	Bahnstrasse 12, 65205 Wiesbaden-Erbenheim, Germany	Phone:0611-71580
TEAC FRANCE S.A.	17, Rue Alexis-de-Tocqueville, CE 005 92182 Antony Cedex, France	Phone:(1)42.37.01.02
TEAC NEDERLAND BV	Perkinsbaan 11, 3439 ND Nieuwegein, Nederland	Phone:03-402-30229
TEAC AUSTRALIA PTY., LTD. A.C.N. 005 408 462	106 Bay Street, Port Melborne, Victoria 3207, Australia	Phone:(03)9644-2442
TEAC ITALIANA S.p.A.	Via C. Cantù 5, Cinisello Balsamo, Milano, Italy	Phone:02-66010500

PRINTED IN JAPAN 0696SK 0.24 M-1194A

TEAC SCHEMATIC DIAGRAM A-BX7R MAIN CONNECTOR PCB



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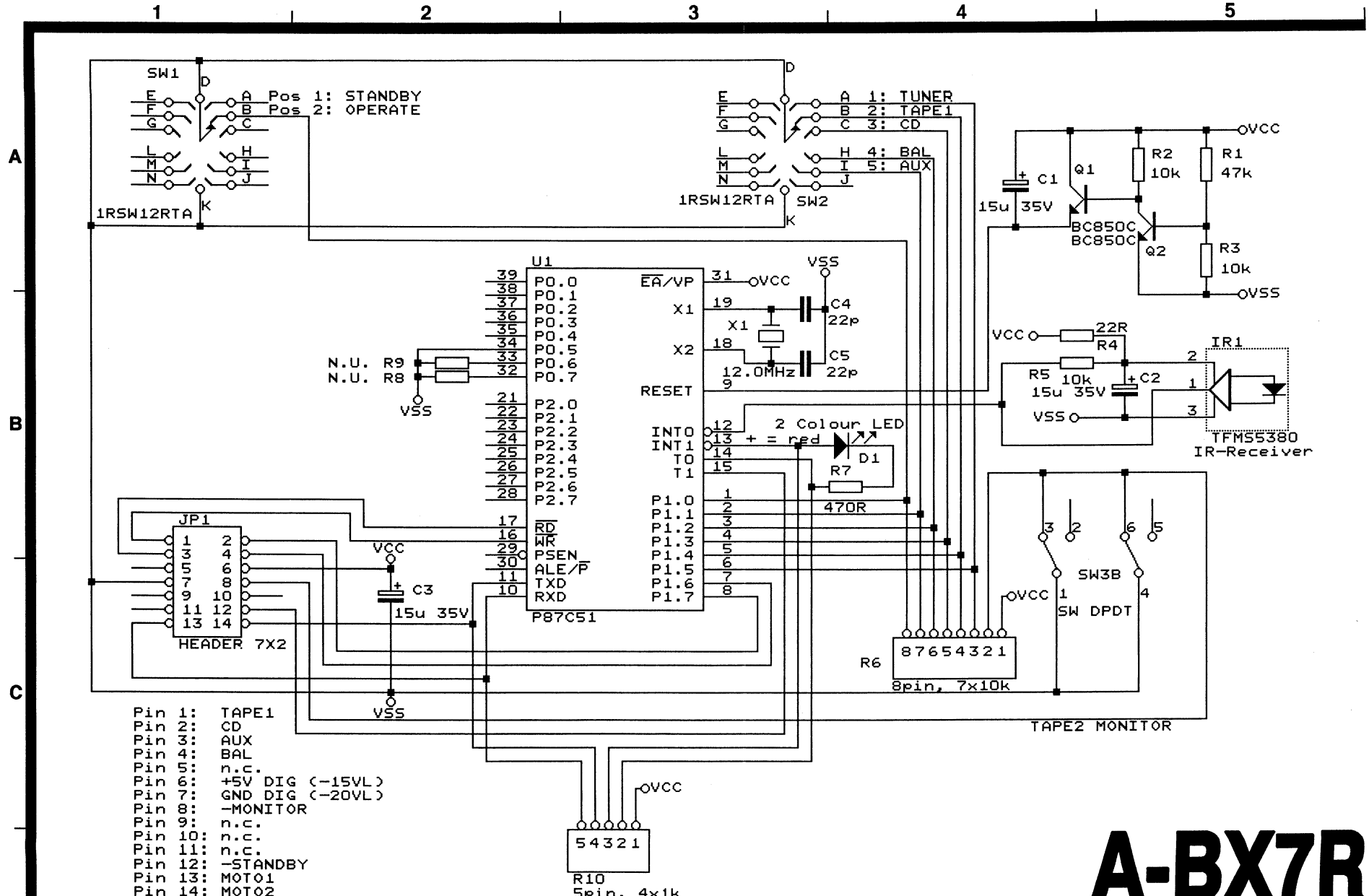
A-BX7R
Integrated Stereo Amplifier

1 st Issue; June 1996

TEAC SCHEMATIC DIAGRAM A-BX7R FRONT PANEL PCB



Pin 1: TAPE1
Pin 2: CD
Pin 3: AUX
Pin 4: BAL
Pin 5: n.c.
Pin 6: +5V DIG (-15VL)
Pin 7: GND DIG (-20VL)
Pin 8: -MONITOR
Pin 9: n.c.
Pin 10: n.c.
Pin 11: n.c.
Pin 12: -STANDBY
Pin 13: MOT01
Pin 14: MOT02

A-BX7R

Integrated Stereo Amplifier

1 st Issue; June 1996

TEAC SCHEMATIC DIAGRAM A-BX7R MAIN PCB (1/2)

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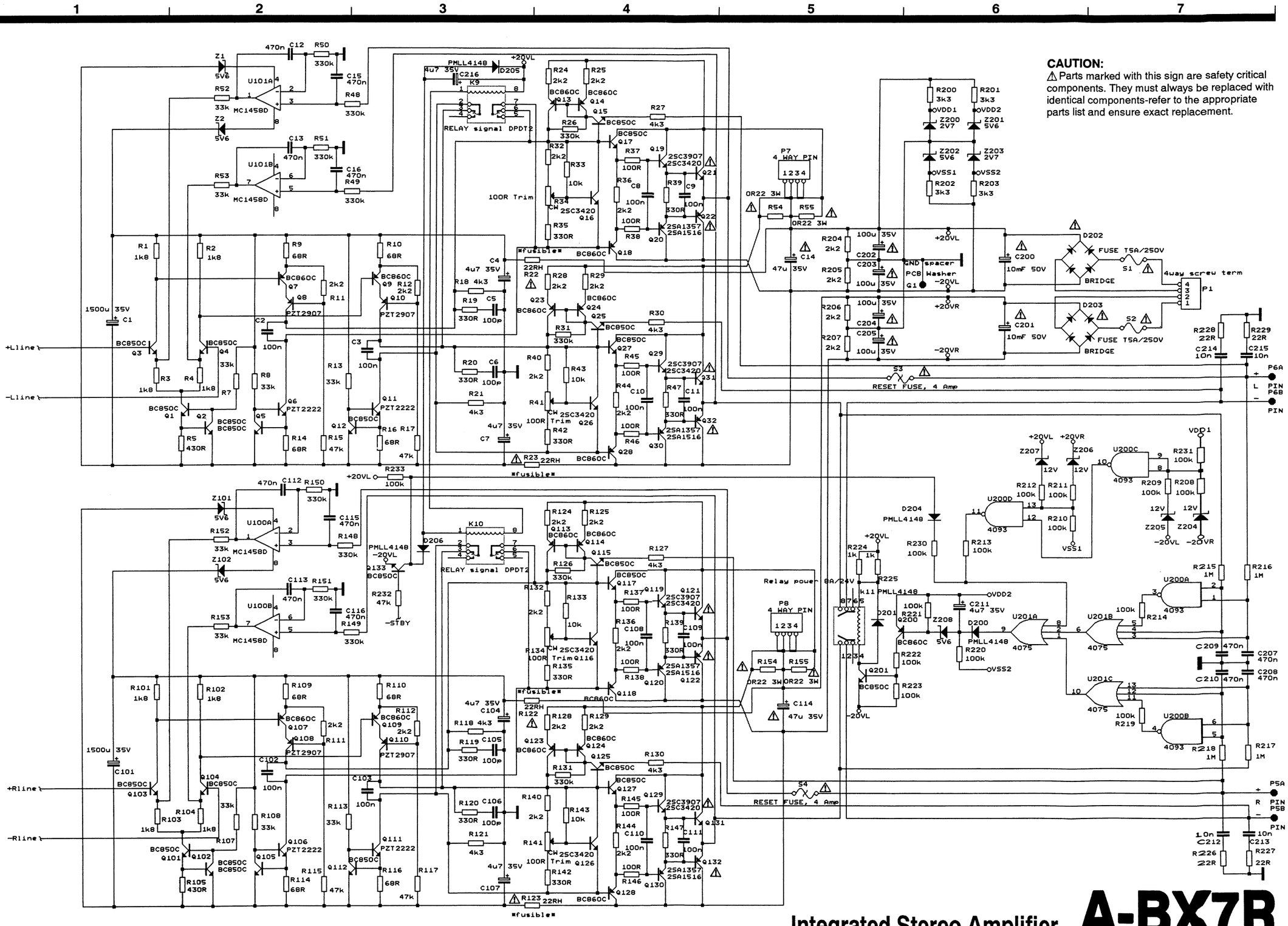
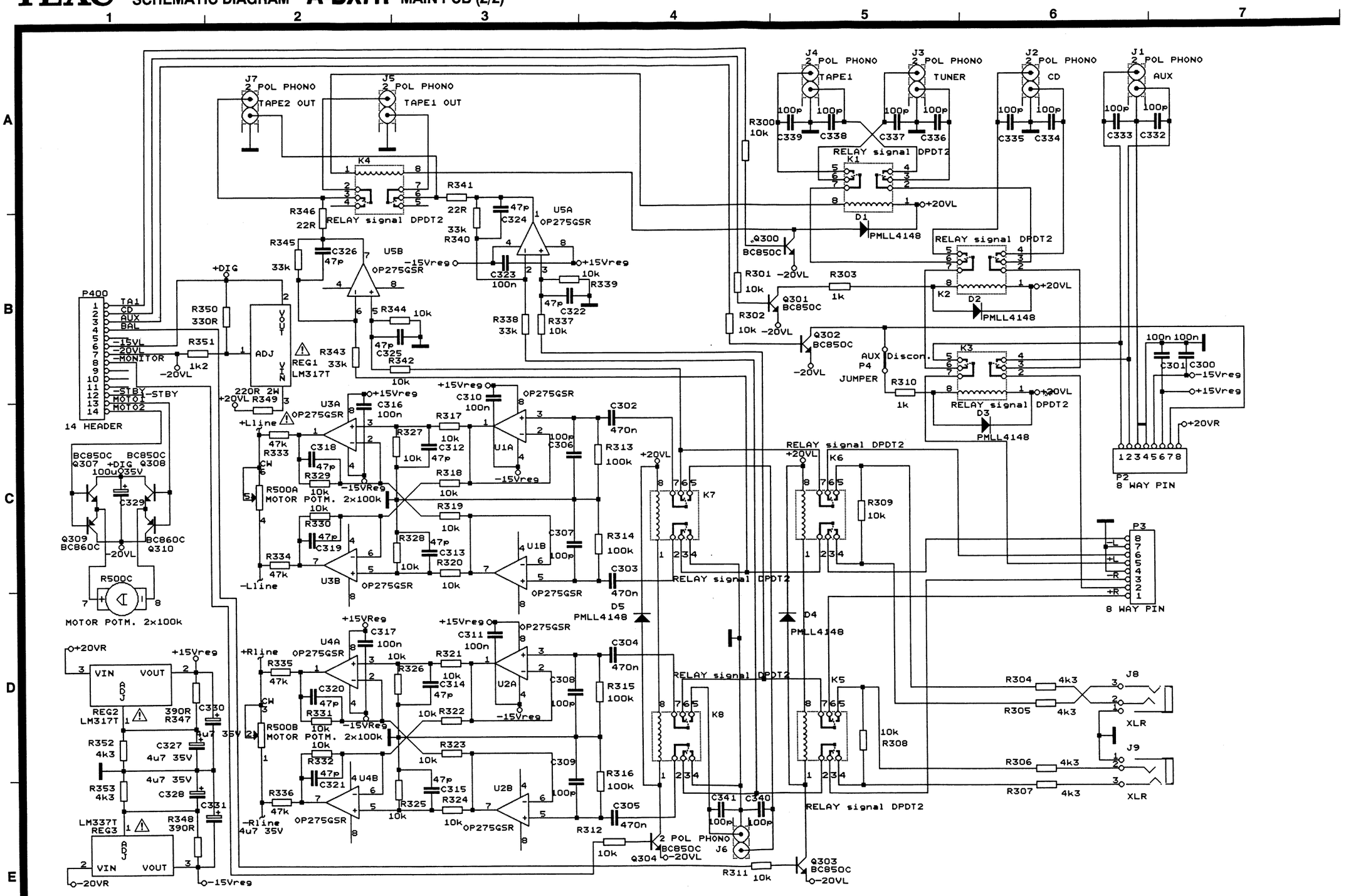


Integrated Stereo Amplifier **A-BX7R**

1 st Issue; June 1996

TEAC SCHEMATIC DIAGRAM A-BX7R MAIN PCB (2/2)



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Integrated Stereo Amplifier A-BX7R

1 st Issue; June 1996